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FLOODPLAIN MANAGEMENT SECTION

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COMPREHENSIVE PLANNING

Floodplain management is an important part of comprehensive planning for your community. Recently Montana's Department of Commerce revised the Model Subdivision regulations to serve as a guide to local planning boards and governing bodies when developing or updating their subdivision regulations. Standards for flood hazard evaluations are incorporated into the Model.

Many of the guidelines in the Model Subdivision Regulations are based upon statutory requirements; however, there is much left to the discretion of the local governing body. A proposed subdivision could infringe on the floodplain of a stream in an area that does not have detailed flood hazard information. In such a case, the local governing body may and should require the subdivider to provide sufficient data to the Floodplain Management Section to identify and delineate the flood prone areas.

The information required includes a subdivision plat with elevation contours, cross sections of the entire floodplain, descriptions and sketches of all bridges in the vicinity, and color photographs of the stream and overbank areas which clearly show stream bank material and vegetation. Requirements may vary—the subdivider is encouraged to contact the Floodplain Management Section. This information will be used to delineate a 100-year floodplain. A water surface profile will also be established to help guide development of the subdivision.

Approximately half of Montana counties have prepared comprehensive plans for guiding future development. Floodplain management regulations can be incorporated into these plans. This is one avenue for adopting legally enforceable land-use regulations. The other statutory authority for adopting floodplain management regulations is derived from the Floodplain and Floodway Management Act, Title 76—Chapter 5, MCA. It is generally better to use this authority. Regardless of which approach is used, floodprone areas should be identified and addressed in the comprehensive plan—these floodprone areas are unsuitable for certain residential and commercial development.

FLOOD-PROOFING TECHNIQUE FOR MOBILE HOMES

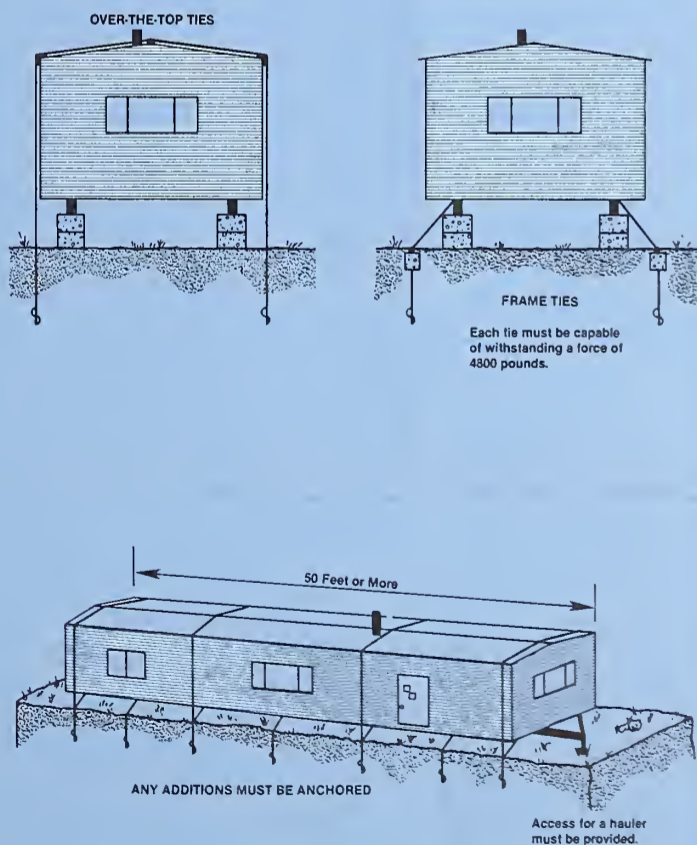
Mobile homes in emergency phase communities with identified flood hazard areas must comply with the same floodplain regulations as conventional structures do. (1) All new construction and substantial improvements (greater than 50% value) must be anchored to resist flotation, collapse, or lateral movement of the structure. (2) All mobile homes must be anchored by providing over-the-top and frame ties to ground anchors.

Specifically, this requires that over-the-top ties be provided at each end with two additional ties equally spaced on each side—mobile homes less than 50 feet long require only one additional tie per side. Frame ties are to be provided at each corner with five additional ties per side at intermediate points—homes less than 50 feet long require only four additional ties per side. All components of the anchoring system must be able to carry a force of 4,800 pounds; any addition to the mobile homes must be similarly anchored.

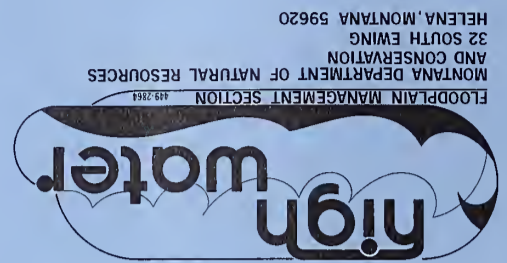
The over-the-top and frame ties can be anchored to a concrete pad or anchored into the ground with augers or concrete deadmen. The augers are commercially available and many newer mobile homes are constructed with sleeves for the over-the-top ties already provided.

New construction and substantial improvements of any residential structure must have the lowest floor, including the basement, elevated to or above the base flood elevation or the highest known historical flood if no base flood data is available.

MOBILE HOME ANCHORING REQUIREMENTS



Regular Phase communities must comply with the emergency phase regulations for mobile homes and conventional residential structures, with some differences.



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These are: Adequate surface drainage must be provided, as well as access for a hauler. All residential structures on new lots, including mobile homes, must be constructed on suitable fill so that the lowest floor (including basement) is two feet or more above the base flood elevation. The fill must be at an elevation no lower than the base flood elevation and shall extend for at least fifteen (15) feet at that elevation beyond the structure in all directions.

In the floodway, if a mobile home is removed, replacement is allowable only within an existing mobile home park or mobile home subdivision. The homes must be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties.

Mobile homes can be lifted off their foundations by flood waters if they are not properly anchored. They may be carried downstream and block bridges or culverts and create a potentially disastrous situation. They may also lodge against trees or other objects and divert flood flows.

FLOOD PROOFING FOR CONVENTIONAL STRUCTURES

Flood proofing residential structures must be done in compliance with Montana standards for fill mentioned above. This applies to communities that have adopted the minimum standards for floodplain management established by the State of Montana. Communities in the Emergency NFIP must use either the greatest flood of record or judgment by the floodplain administrator as a basis for establishing an elevation for flood proofing.

Flood proofing of commercial and industrial structures includes either construction on suitable fill as specified in the residential construction regulations, or adequate structural flood proofing to no lower than two feet above the base flood elevation.

Structural flood proofing must be done by using impermeable membranes or materials for floors and walls, and water-tight closures for all windows, doors, and other openings. A registered professional engineer or architect must certify that the flood proofing methods are adequate to withstand the flood depths, pressures, velocities, impact, and uplift forces associated with the flood of 100-year frequency.

All incoming power service equipment, including meter bases, transformers, and distribution and lighting panels must be located a minimum of two feet above the base flood elevation. All electrical wiring systems installed at or below the base flood elevation shall be suitable for continuous submersion and certified as adequate by a registered engineer or architect. Float-operated control valves must be installed in supply lines to gas furnaces so that the fuel supply is automatically shut off when flood waters reach the floor level where the furnace is located. Sewer lines must have check valves installed to prevent sewage back-up and all toilets, sinks, and drains must be located so that the lowest point of possible water entry is at least two feet above the base flood elevation.

Where no base flood data is available the floodplain administrator shall use judgment in establishing an elevation for flood proofing. This can be based on the highest known levels that historical floods have reached or on topographic characteristics if no information is available regarding past floods.

Floodplain Management Section Staff:

John Hamill, Supervisor
Cindy Forgey, Technician/Clerk
Tim Pool, Coordinator, NFIP

FLOODWAY FRINGE: RESIDENTIAL STRUCTURES

